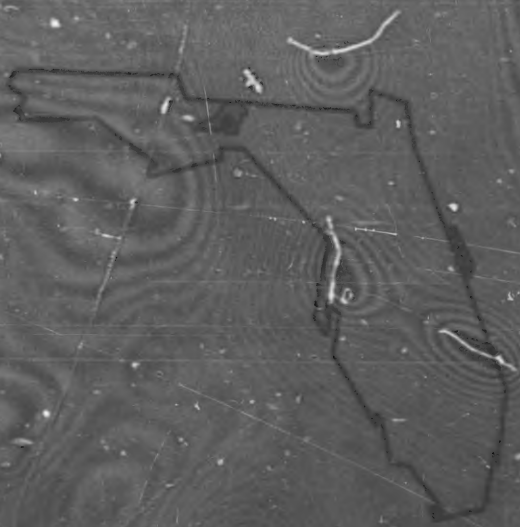
MAY 2 1985

FLOOD INSURANCE STUDY

ORIGINAL

CITY OF TALLAHASSEE, FLORIDA
LEON COUNTY



REVISED:
AUGUST 6, 1986

Federal Emergency Management Agency

NOTICE TO
FLOOD INSURANCE STUDY USERS

This Flood Insurance Study was revised on August 5, 1986. Users should refer to the Addendum (Section 8.0) of this text for further information.

Part or all of this Flood Insurance Study may be revised at any time. Users are, therefore, cautioned that a published map revision (i.e., a revised Flood Insurance Rate Map) may not include a reprinting of the text, tables, and/or profiles, resulting in a discrepancy between the revised map and the original study components. It is the responsibility of the user to consult with community officials to obtain the most current Flood Insurance Study components.

Initial Flood Insurance Study Effective Date: December 6, 1976

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Flood Boundary and Floodway Map

PUBLISHED SEPARATELY:

Flood Insurance Rate Map Index
Flood Insurance Rate Map

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FLOOD INSURANCE STUDY

1.0 INTRODUCTION

1.1 Purpose of Study

The purpose of this Flood Insurance Study is to investigate the existence and severity of flood hazards in the City of Tallahassee, Leon County, Florida, and to aid in the administration of the Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Initial use of this information will be to convert Tallahassee to the regular program of flood insurance by the Federal Insurance Administration. Further use of the information will be made by local and regional planners in their efforts to promote sound flood plain management measures.

1.2 Coordination

Federal, state, and local agencies were contacted for information which would be useful for this study. Flood records and data on local flooding problems were obtained from city employees, U. S. Geological Survey personnel, and the local newspapers. The extent of flooding in some areas of the city was determined from interviews with local residents and from flood marks.

A final coordination meeting with the community was held on June 18, 1975.

1.3 Authorization and Financing

This Flood Insurance Study was conducted by the U. S. Geological Survey at the request of the Federal Insurance Administration, U. S. Department of Housing and Urban Development. The source of authority for the study is the National Flood Insurance Act of 1968, as amended. Authority and financing are contained in Inter Agency Agreement No. IAA-H-3-73, Project Order No. 3, 1973.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated area of the City of Tallahassee, Florida. The study included a detailed analysis of the flood conditions for the three main drainage ditches in the city and for scattered, low-lying areas which are subject to flooding during intense rainfall.

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2.2 Community Description

Tallahassee is located at the eastern end of the Florida panhandle, 24 miles north of the Gulf of Mexico. The city covers an area of 26 square miles. The topography of Tallahassee is hilly, and the land is covered with trees and shrubs. In 1970, the population was 71,897.

Nearly 70 percent of the city is drained by three ditches, called in this report: South Ditch, Middle Ditch, and West Ditch. All have been dug in hard clay soil, with no confining levees, and are unimproved except for stone and mortar lining on part of Middle Ditch along Franklin Boulevard. South Ditch runs along the south edge of the city, and generally parallels Orange Avenue. Middle Ditch runs through the middle of the city, beginning near Leon High School, and parallels Franklin Boulevard, Canal Street, and Springhill Road. West Ditch runs along the west edge of the city, behind the Tallahassee Community College, and through Dale Mabry subdivision. All three ditches drain into Munson Slough, south of the city.

2.3 Principal Flood Problems

Channel overflow from the three ditches is the principal flood problem in Tallahassee.

In addition, scattered, isolated depressions in the city flood during intense rains. Some other areas, not identified, occasionally flood due to temporary causes, such as street trash floating into and clogging drains.

2.4 Flood Protection Measures

The existing drainage ditches are the only flood protection measures employed in Tallahassee. Some improvements in channel geometry over the last few years have enabled the ditches to handle a larger capacity flow.

3.0 ENGINEERING METHODS

Standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Floods having recurrence intervals of 10-, 50-, 100-, and 500-years have been selected as having special significance for the land use and flood insurance applications of the Flood Insurance Program. The analyses reported here reflect current and planned conditions in the study area.

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3.1 Hydrologic Analyses

Gaging stations near Tallahassee have been used in determining flood flow frequencies. Of these stations, one is on the Ochlockonee River, which flows northwest of the city.

At the north edge of the city, a stream gaging station is in operation on a tributary to Megginnis Arm of Lake Jackson below a drainage area of 1-1/2 square miles. Lake-stage stations are in operation on Lakes Bradford and Jackson, both outside the city. The stages of lakes and ponds within the city were related to the stage records for these two lakes.

Flood flow frequencies were computed from equations developed from a log-Pearson Type III analysis of the gaging station records of the area (Reference 1). Results compared well with values derived from a regional flood analysis by the U. S. Geological Survey (Reference 2).

Drainage area peak discharge relationships for the ditches are compared with other streams in the region and in other parts of the United States in Figure 1.

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of the drainage ditches were made to provide estimates of the elevations of floods of the selected recurrence intervals. Water-surface elevations were computed through the use of the U. S. Geological Survey step-backwater computer program. Cross sections for the backwater analyses of the drainage ditches were field surveyed. Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Boundary and Floodway Map (Exhibits 2-3).

Flood profiles were drawn showing computed water-surface elevations to an accuracy of 0.5 foot for floods of the selected recurrence intervals (Exhibit 1).

4.0 FLOOD PLAIN MANAGEMENT APPLICATIONS

A prime purpose of the National Flood Insurance Program is to encourage state and local governments to adopt sound flood plain management programs. Each Flood Insurance Study, therefore, includes a Flood Boundary Map designed to assist communities in developing sound flood plain management measures.

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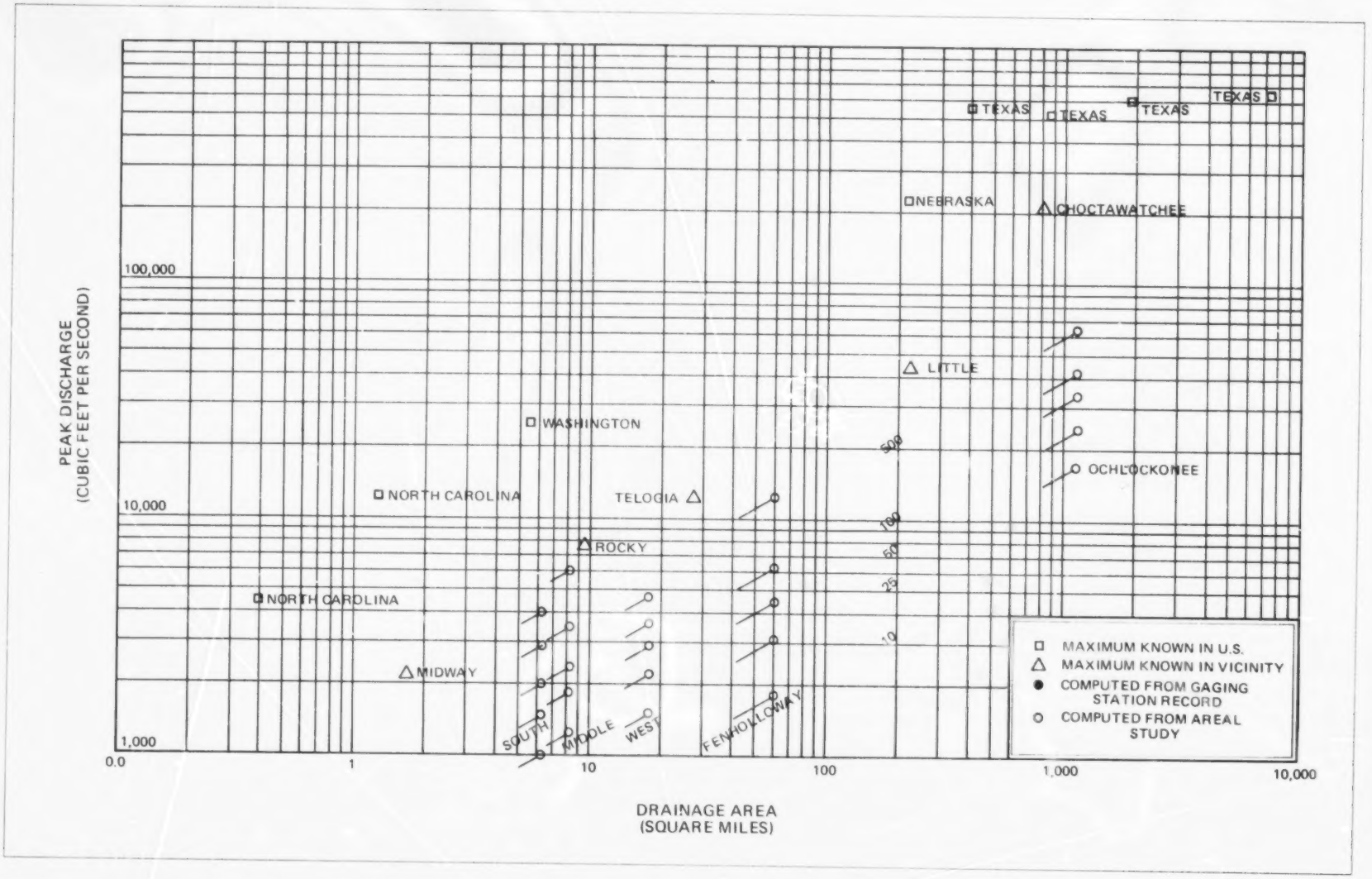

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL
(LEON CO.)

WATER LEVEL DRAINAGE CURVE

CITY OF TALLAHASSEE

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4.1 Flood Boundaries

In order to provide a national standard without regional discrimination, the 100-year flood has been adopted by the Federal Insurance Administration as the base flood for purposes of flood plain management measures. The 500-year flood is employed to indicate additional areas of flood risk in the community.

For each drainage ditch, the boundaries of the 100-year and the 500-year flood have been delineated using the flood elevations determined at each cross section. Between the cross sections, the boundaries were interpolated using topographic maps. In cases where the 100-year and the 500-year flood boundaries coincide, only the 100-year boundary has been shown.

4.2 Floodway

Encroachment on flood plains, such as artificial fill, reduces the flood-carrying capacity and increases flood heights, thus increasing flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes of the Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood is divided into a proposed floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent flood plain areas, that must be kept free of encroachment in order that the 100-year flood be carried without substantial increases in flood heights. Criteria adopted by the Federal Insurance Administration limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this report are proposed to local agencies as minimum standards that can be adopted or that can be used as a basis for additional studies.

The floodway for this study was computed on the basis of equal conveyance reduction from each side of the flood plain. The results of these computations are tabulated for each ditch studied (Table 1). On the Flood Boundary and Floodway Map (Exhibits 2-3), the floodway boundaries were determined at each cross section; between cross sections, the boundaries were interpolated, as were the flood boundaries.

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CROSS SECTION	STREAM DISTANCE[1]	APPROXIMATE FLOODWAY WIDTH (FEET)	100 YEAR FLOOD ELEVATIONS	
			NATURAL (FEET)	ENCROACHMENT (FEET)
WEST DITCH				
A	0.63	130	48.3	49.3
B	0.73	90	48.6	49.6
C	0.81	145	48.9	49.9
D	0.88	302	49.2	50.2
E	1.00	287	49.3	50.3
F	1.08	203	49.5	50.5
G	1.20	311	49.7	50.7
H	1.26	478	49.8	50.8
I	1.48	53	51.3	52.2
J	1.87	281	53.8	54.8
K	2.06	89	54.5	55.4
L	2.21	164	55.1	56.0
M	2.48	62	56.9	57.8
N	2.64	70	57.4	58.2
O	2.79	80	57.4	58.2
P	2.92	55	57.5	58.3
Q	3.09	54	58.2	58.9
R	3.24	49	59.0	59.5
S	3.38	42	60.0	60.4
T	3.53	80	61.0	61.3
MIDDLE DITCH				
A	0.63	120	45.1	45.4
B	0.68	200	46.1	46.5
C	0.75	380	47.0	47.9
D	0.86	485	47.7	48.6

[1]MILES ABOVE MOUTH

TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOODWAY DATA

WEST DITCH, MIDDLE DITCH

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CROSS SECTION	STREAM DISTANCE[1]	APPROXIMATE FLOODWAY WIDTH (FEET)	100 YEAR FLOOD ELEVATIONS	
			NATURAL (FEET)	ENCROACHMENT (FEET)
MIDDLE DITCH				
E	0.92	420	48.6	49.6
F	1.05	110	49.0	50.0
G	1.15	110	51.3	52.3
H	1.32	120	54.9	55.9
I	1.44	120	55.8	56.8
J	1.58	70	56.0	57.0
K	1.69	40	57.5	58.5
L	1.89	25	64.5	64.7
M	1.99	23	65.9	66.1
N	2.09	29	67.2	67.4
O	2.23	38	70.8	71.0
P	2.35	35	73.2	73.6
Q	2.54	31	75.0	75.0
R	2.69	29	77.2	77.6
S	2.79	22	79.8	80.0
T	2.86	30	81.8	82.0
U	2.94	32	82.6	82.7
V	3.03	40	83.9	84.1
W	3.16	34	86.4	86.7
X	3.47	79	92.0	93.0
Y	3.54	15	95.2	96.2
Z	3.65	74	98.8	99.8
AA	3.78	70	100.7	101.7
AB	3.87	71	102.1	103.1
AC	3.99	15	104.6	105.6

[1]MILES ABOVE MOUTH

TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL
(LEON CO.)

FLOODWAY DATA

MIDDLE DITCH

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CROSS SECTION	STREAM DISTANCE[1]	APPROXIMATE FLOODWAY WIDTH (FEET)	100 YEAR FLOOD ELEVATIONS	
			NATURAL (FEET)	ENCROACHMENT (FEET)
SOUTH DITCH				
A	0.17	211	40.0	41.0
B	0.23	380	40.0	41.0
C	0.37	287	40.1	41.1
D	0.62	850	40.8	41.8
E	0.81	671	41.0	42.0
F	1.03	400	41.0	42.0
G	1.19	350	42.0	43.0
H	1.31	307	42.7	43.6
I	1.45	40	45.0	46.0
J	1.59	80	46.3	47.2
K	1.89	51	48.1	48.6
L	2.00	84	49.7	50.6
M	2.35	44	56.5	57.3
N	2.57	45	59.1	59.8
O	2.97	50	62.1	62.8
P	3.26	50	67.1	67.7

[1]MILES ABOVE MOUTH

TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOODWAY DATA

SOUTH DITCH

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FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
WEST ARM TRIBUTARY								
A[3]	3.12	351	2020	0.7	51.0	48.0[4]	49.0	1.0
B[3]	3.18	305	1540	0.9	51.0	48.0[4]	49.0	1.0
C[3]	3.28	144	561	2.4	51.0	48.4[4]	49.3	0.9
D-H[2]								
I	4.41	100	440	2.7	63.3	63.3	64.3	1.0
J	4.57	83	304	4.0	65.2	65.2	66.2	1.0
K	4.89	61	455	2.6	67.7	67.7	68.7	1.0
L	4.94	80	310	3.9	68.1	68.1	69.1	1.0
M	5.14	95	375	2.3	70.2	70.2	71.2	1.0
N	5.45	90	340	2.5	73.0	73.0	73.9	0.9
O	5.61	102	449	1.9	76.4	76.4	77.4	1.0
P	5.71	382	902	1.0	76.7	76.7	77.7	1.0

[1]MILES ABOVE PINEY Z LAKE
[2]FLOODWAY NOT COMPUTED
[3]CROSS SECTION OUTSIDE OF CORPORATE LIMITS
[4]ELEVATIONS WITHOUT CONSIDERING BACKWATER EFFECTS FROM LAKE LAFAYETTE

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TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOODWAY DATA

WEST ARM TRIBUTARY

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FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
MEGGINIS ARM TRIBUTARY								
A[2]	0.30	35	343	5.9	96.7	96.7	97.7	1.0
B[2]	0.31	49	331	6.2	97.0	97.0	98.0	1.0
C[2]	0.34	54	675	3.0	97.5	97.5	98.5	1.0
D[2]	0.39	90	363	5.6	97.6	97.6	98.6	1.0
E[2]	0.40	110	326	6.3	97.7	97.7	98.7	1.0
F[2]	0.44	140	400	5.2	97.7	97.7	98.7	1.0
G[2]	0.53	182	508	4.0	101.1	101.1	102.0	0.9
H[2]	0.63	353	1750	1.2	103.6	103.6	104.6	1.0
I	0.72	209	1090	1.9	105.5	105.5	106.5	1.0
J	0.90	30	184	11.1	110.1	110.1	111.1	1.0
K	1.04	25	438	3.1	113.4	113.4	114.4	1.0

[1]MILES ABOVE LAKE JACKSON
[2]CROSS SECTION LOCATED OUTSIDE CORPORATE LIMITS

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TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOODWAY DATA

MEGGINNIS ARM TRIBUTARY

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
ALFORD ARM TRIBUTARY								
AG	10.62	173	668	0.8	83.0	83.0	84.0	1.0
AH	10.63	87	470	1.2	83.0	83.0	84.0	1.0
AI	10.72	121	523	1.1	83.5	83.5	84.5	1.0
AJ	10.96	100	157	3.6	86.0	86.0	86.8	0.8
AK	11.02	93	379	1.5	88.7	88.7	89.6	0.9
AL	11.06	64	247	2.3	88.8	88.8	89.7	0.9
NORTH BRANCH GUM CREEK								
N	2.23[2]	73	353	1.6	77.3	77.3	78.3	1.0

[1]MILES ABOVE RAILROAD ACROSS NORTH ARM OF LAKE LAFAYETTE
[2]MILES ABOVE CAPITAL CIRCLE

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TABLE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOODWAY DATA

ALFORD ARM TRIBUTARY—NORTH BRANCH GUM CREEK

The intended surcharge of one foot was not met on much of the stream lengths because encroachment was not allowed into the main channel.

The area between the floodway and the boundary of the 100-year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevations of the 100-year flood more than one foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 2.

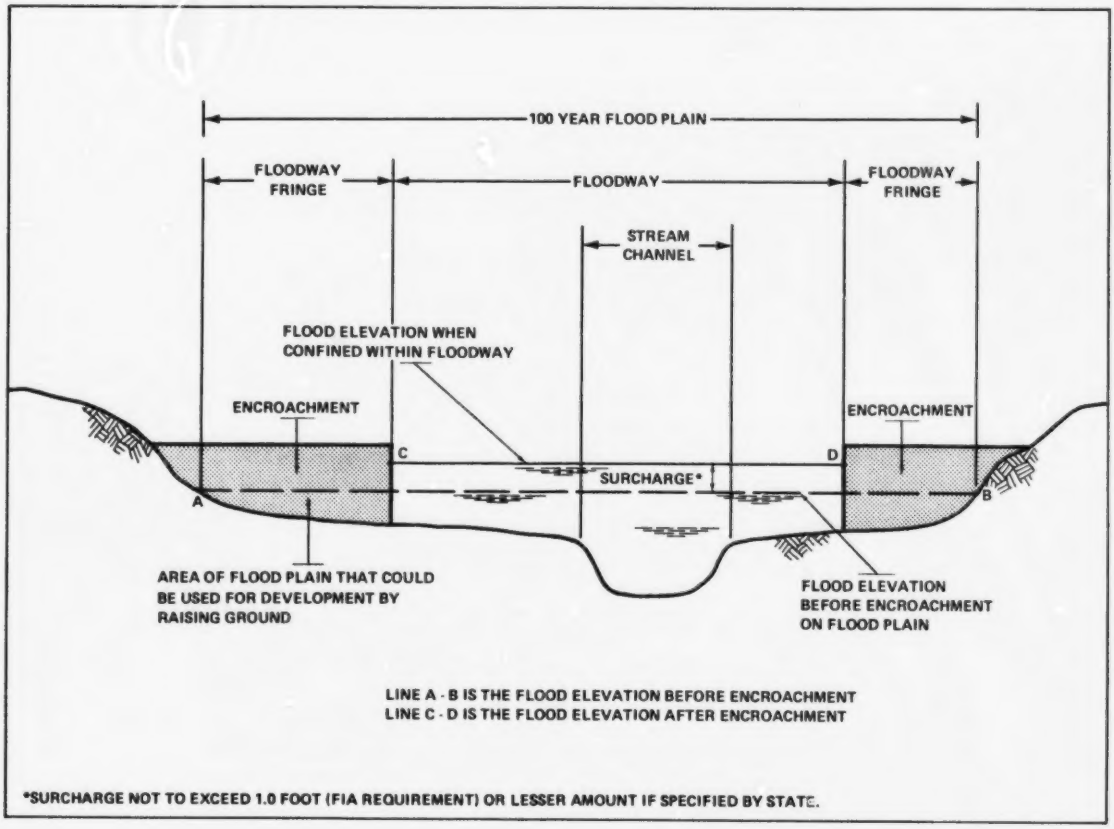
100 YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE*
A
B
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN
LINE A - B IS THE FLOOD ELEVATION BEFORE ENCROACHMENT
LINE C - D IS THE FLOOD ELEVATION AFTER ENCROACHMENT
*SURCHARGE NOT TO EXCEED 1.0 FOOT (FIA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

Figure 2. Floodway Schematic

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5.0 INSURANCE APPLICATION

In order to establish actuarial insurance rates, the Federal Insurance Administration has developed a process to transform the data from the engineering study into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors, and flood insurance zone designations for each watercourse affecting Tallahassee.

5.1 Reach Determinations

Reaches are defined as lengths of watercourses having relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods. For this study, this difference did not have a variation greater than that indicated in the following table for more than 20 percent of the reach.

Average Difference Between 10- and 100-year Floods	Variation
2 to 7 feet	1.0 foot

Six reaches meeting these criteria were required to establish flood insurance zones for Tallahassee as follows:

A single reach was required for West and South Ditches; Middle Ditch formed four reaches.

5.2 Flood Hazard Factors

The Flood Hazard Factor (FHF) is the Federal Insurance Administration device used to correlate flood information with insurance rate tables. Correlations between property damage from floods and their FHF are used to set actuarial insurance premium rate tables based on FHFs from 005 to 200.

The FHF for a reach is the average weighted difference between the 10- and 100-year flood water-surface elevations expressed to the nearest one-half foot, and shown as a three-digit code. For example, if the difference of water-surface elevations between the 10-year and 100-year floods is 0.7 feet, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference between the 10-year and 100-year water-surface elevations is greater than 10.0 feet, accuracy for the FHF is to the nearest foot.

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5.3 Flood Insurance Zones

After the determination of reaches and their respective Flood Hazard Factors, the entire incorporated area of Tallahassee was divided into zones, each having a specific flood potential or hazard. Each zone was assigned one of the following flood insurance zone designations:

Zones A4, A5, A8, A10, A12:	Special flood hazard areas inundated by the 100-year flood, with base flood elevations determined and zone designations assigned according to FHF.
Zone A0:	Special flood hazard areas inundated by the 100-year flood that have shallow flood depths (less than 2 feet). Base flood elevations are not determined.
Zone B:	Area between Zones A4, A5, A8, A10, A12, and the limits of the 500-year flood.
Zone C:	Area not subject to flooding by the 500-year flood.

Table 2, "Flood Insurance Zone Data," summarizes the flood elevation differences, Flood Hazard Factors, flood insurance zones, and base flood elevations for each reach.

5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for Tallahassee is, for insurance purposes, the net result of the Flood Insurance Study. This is the official map (published separately) on which the Federal Insurance Administration has delineated the flood insurance zones and base flood elevation lines. Base flood elevation lines show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. These maps are developed in accordance with the latest flood insurance map preparation guidelines published by the Federal Insurance Administration.

6.0 OTHER STUDIES

There have been no other flood studies conducted in the area of Tallahassee, Florida.

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FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (FEET NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
WEST DITCH							
REACH 1	0015	−2.1	−0.7	0.8	020	A4	VARIES—SEE MAP
MIDDLE DITCH							
REACH 1	0015,0030	−1.7	−0.4	0.8	015	A3	VARIES—SEE MAP
REACH 2	0015	−4.1	−1.2	1.4	040	A8	VARIES—SEE MAP
REACH 3	0015	−6.0	−1.9	2.1	060	A12	VARIES—SEE MAP
REACH 4	0015	−4.8	−1.6	2.3	050	A10	VARIES—SEE MAP
REACH 5	0015	−2.4	−0.5	0.5	025	A5	VARIES—SEE MAP
SOUTH DITCH							
REACH 1	0030	−1.7	−0.4	0.8	015	A3	VARIES—SEE MAP
REACH 2	0015,0020,0030 0035	−3.8	−1.0	1.2	040	A8	VARIES—SEE MAP
WEST ARM TRIBUTARY							
REACH 1	0020	−0.8	−0.2	0.6	010	A2	VARIES—SEE MAP
REACH 2	0020	−1.8	−0.4	0.8	020	A4	VARIES—SEE MAP
REACH 3	0020	−0.9	−0.3	0.6	010	A2	VARIES—SEE MAP
REACH 4	0020	−0.7	−0.3	0.5	005	A1	VARIES—SEE MAP

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT

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TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOOD INSURANCE ZONE DATA

WEST DITCH—MIDDLE DITCH—SOUTH DITCH—WEST ARM TRIBUTARY

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FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
MEGGINNIS ARM TRIBUTARY							
REACH 1	0015	−1.9	−0.5	1.3	020	A4	VARIES
ALFORD ARM TRIBUTARY							
REACH 1	0010	−1.2	−0.3	0.6	010	A2	VARIES
MUNSON SLOUGH							
REACH 1	0015,0030	−1.7	−0.4	0.8	015	A3	VARIES
NORTH BRANCH GUM CREEK							
REACH 1	0015	−1.0	−0.3	0.6	010	A2	VARIES
SCATTERED AREAS	ALL		SHEET FLOW AREA				LESS THAN 1.5 FOOT

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT

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TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOOD INSURANCE ZONE DATA

MEGGINIS ARM TRIBUTARY—ALFORD ARM TRIBUTARY—MUNSON SLOUGH—NORTH BRANCH GUM CREEK— SCATTERED AREAS

7.0 LOCATION OF DATA

Information concerning the pertinent data used in preparation of this study can be obtained by contacting the Natural and Technological Hazards Division, Federal Emergency Management Agency, 1371 Peachtree Street, NE., Suite 736, Atlanta, Georgia 30309.

8.0 ADDENDUM (Revised: August 5, 1986)

8.1 Purpose

The purpose of this Flood Insurance Study Addendum is to incorporate new data into this currently effective Flood Insurance Study for the City of Tallahassee, Leon County, Florida. This Addendum is intended to provide updated information that aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

8.2 Acknowledgments

The hydrologic analyses for this Addendum were performed by the U.S. Geological Survey (USGS). The Federal Emergency Management Agency (FEMA) reviewed and accepted these data for purposes of this revision.

8.3 Scope

As a result of the recent annexations by the community, the following reaches have been incorporated into this study: Megginnis Arm Tributary from the City of Tallahassee corporate limits to just upstream of Allen Road, West Arm Tributary from Miccosukee Road upstream to Goose Pond, Alford Arm Tributary from Centerville Road upstream to just downstream of Thomasville Road, North Branch Gum Creek from the confluence with West Branch Gum Creek upstream to the City of Tallahassee corporate limits, and portions of Munson Slough, Goose Pond, and Gum Swamp.

8.4 Hydrologic and Hydraulic Analyses

For the detailed study of Megginnis Arm, West Arm, and Alford Arm Tributaries, the hydrologic and hydraulic analyses were performed by the USGS for the 10-, 50-, 100-, and 500-year frequencies.

The Flood Insurance Study for Leon County, Unincorporated Areas, Florida (Reference 4) and 7.5 minute series USGS topographic maps at a scale of 1:24000 with a contour interval of 10 feet (Reference 5) were used to delineate the flooding for North Branch Gum Creek, Munson Slough, Goose Pond, and Gum Swamp.

The peak discharge-drainage area relationships for Alford Arm, West Arm, and Megginnis Arm Tributaries, Munson Slough, and North Branch Gum Creek for selected recurrence intervals are presented in Table 3, Revised Summary of Discharges. This information was included in the Leon County Flood Insurance Study (Reference 4).

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TABLE 3 - REVISED SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ MILES)	PEAK DISCHARGE (CFS) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
ALFORD ARM TRIBUTARY					
at Centerville Road	15.2	30[1]	200[1]	450[1]	800
at Thomasville Road	6.3	300	487	566	736
WEST ARM TRIBUTARY					
at Capital Circle	17.1	730	1,180	1,380	1,790
at U.S. Highway 90	12.9	636	1,030	1,200	1,560
at Centerville Road	6.7	458	744	865	1,120
MEGGINNIS ARM TRIBUTARY					
at Lakeshore Drive	3.1	1,080	1,750	2,040	2,650
at Allen Road	1.5	747	1,210	1,410	1,830
MUNSON SLOUGH					
at Springhill Road	50.9	1,300	2,110	2,450	3,190
at Lake Bradford Road	41.3	800	1,050	1,150	1,300
NORTH BRANCH GUM CREEK					
at Gum Creek	3.8	382	619	720	936
at U.S. Highway 90	2.1	288	440	550	736

[1] Discharges reduced because of storage in lakes.

Attenuation of peak discharges was estimated in areas of water ponding and flow through lakes. Long Pond and other lakes between Thomasville and Centerville Roads along the Alford Arm Tributary of Lake Lafayette drastically reduce peak discharges. Floods from Middle Ditch enter Munson Slough south of Orange Avenue and west of Springhill Road. At this point, the flow divides with a large part going west and into Black Swamp storage. Peak discharges are reduced by storage resulting from the constricting effect of bridges at Lake Bradford Road and Springhill Road. Peak discharges into Munson Slough from Middle Ditch often precede those from Bradford Brook by 2 or 3 days so that the Middle Ditch peak discharge has receded before the other peak from Bradford Brook arrives.

8.5 Other Studies

The revised study for the City of Tallahassee was closely coordinated with the Flood Insurance Study for the Unincorporated Areas of Leon County, Florida (Reference 4). Consequently, the Flood Insurance Study for Leon County agrees with the special flood hazard area designated in this study.

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9.0 BIBLIOGRAPHY AND REFERENCES

1. Rabon, J.W., Elevation of Streamflow—Data Program in Florida, Open-File Report 70008, 1971.

2. U.S. Geological Survey, Water Supply Paper 1674, Magnitude and Frequency of Floods in the United States.

3. U.S. Water Resources Council Bulletin No. 15, A Uniform Technique for Determining Flood Flow Frequencies, December 1967.

4. Federal Emergency Management Agency, Flood Insurance Study, Leon County, Unincorporated Areas, Florida, June 1982.

5. U.S. Geological Survey, 7.5 Minute Series Topographic Maps, Scale 1:24000, Contour Interval 10 feet: Tallahassee, Florida, 1970; Lafayette, Florida, 1954.

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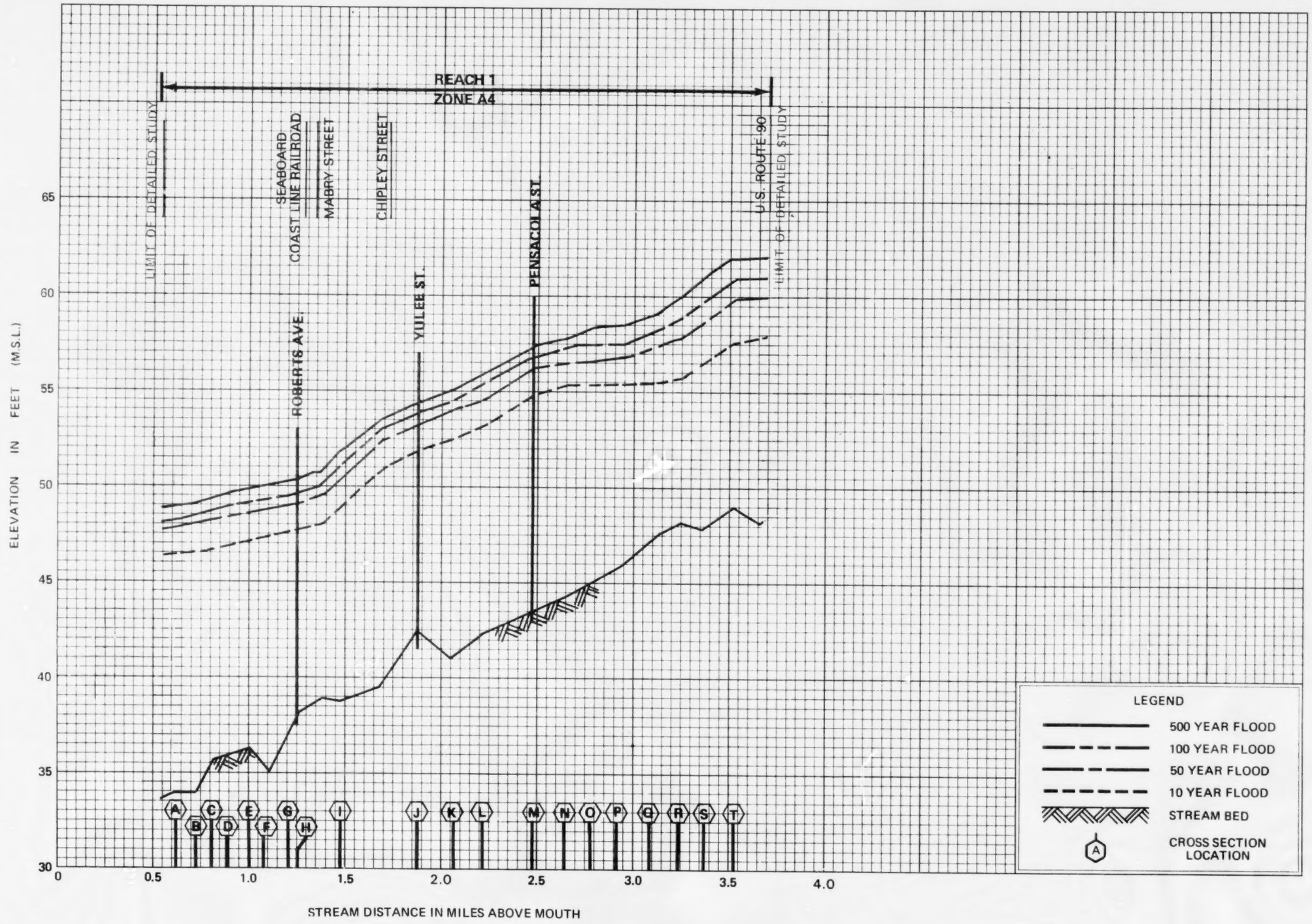

FLOOD PROFILES

WEST DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL
(LEON CO.)

01P

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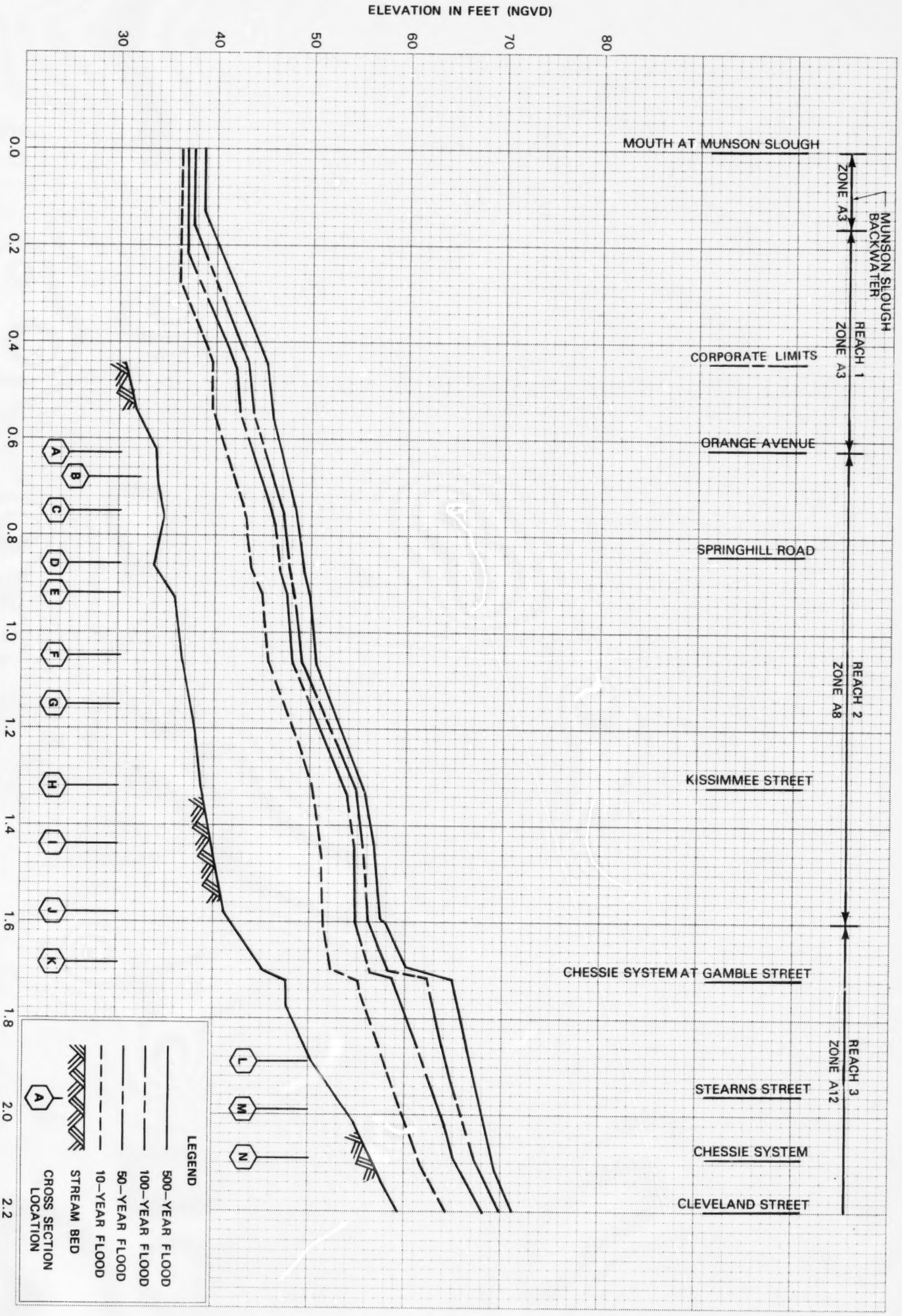

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21

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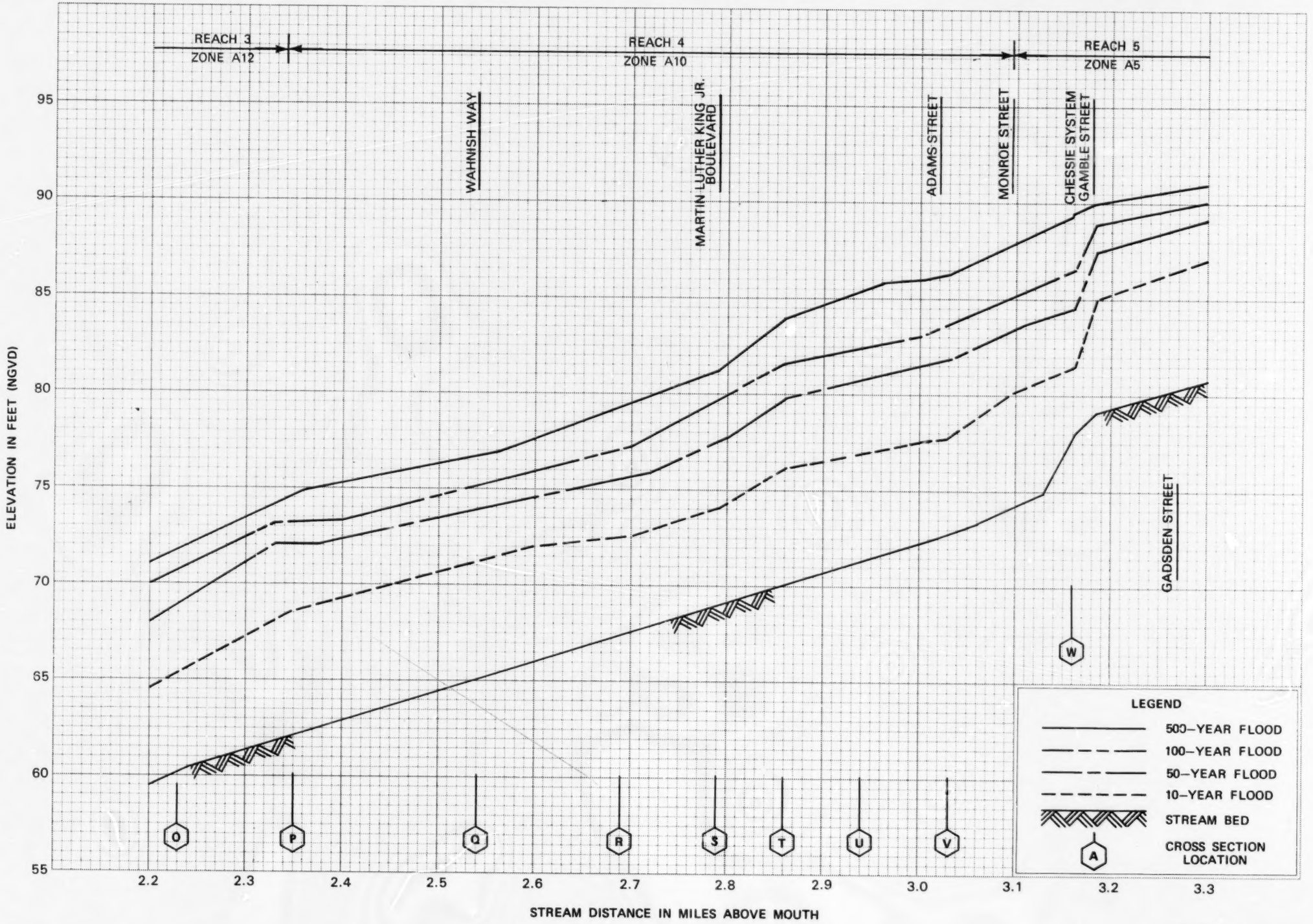

FLOOD PROFILES

MIDDLE DITCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

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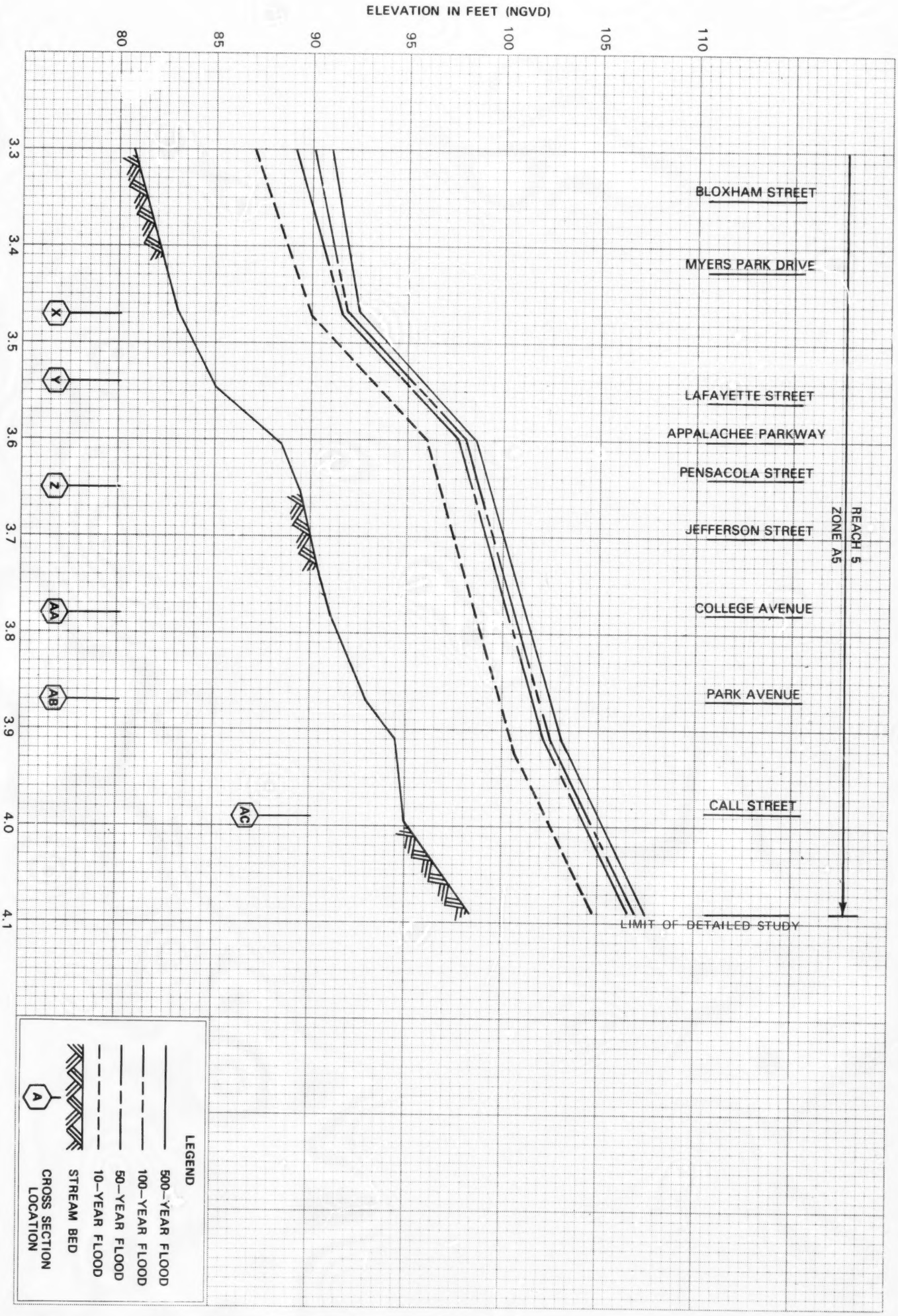

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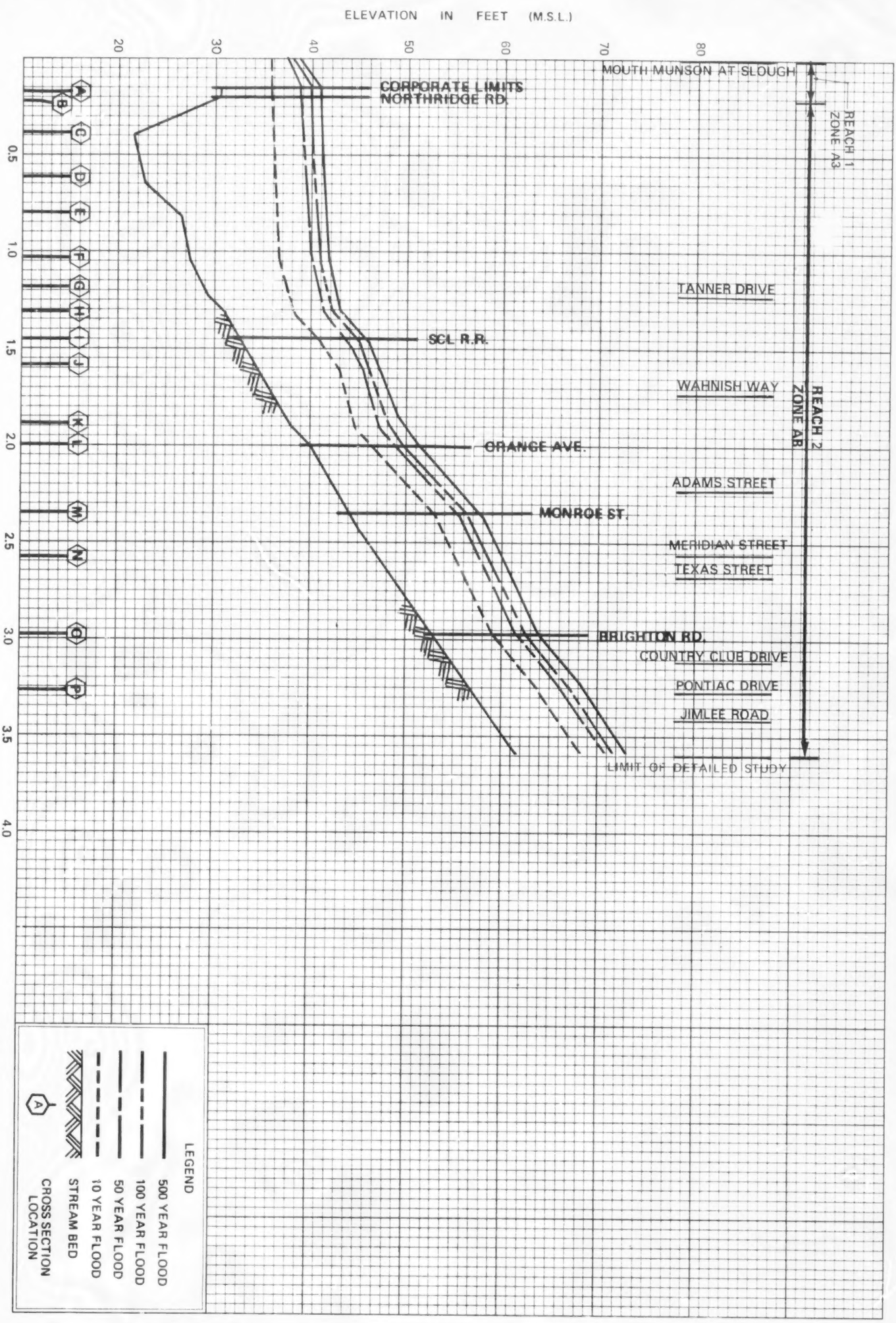

05P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

FLOOD PROFILES

SOUTH DITCH

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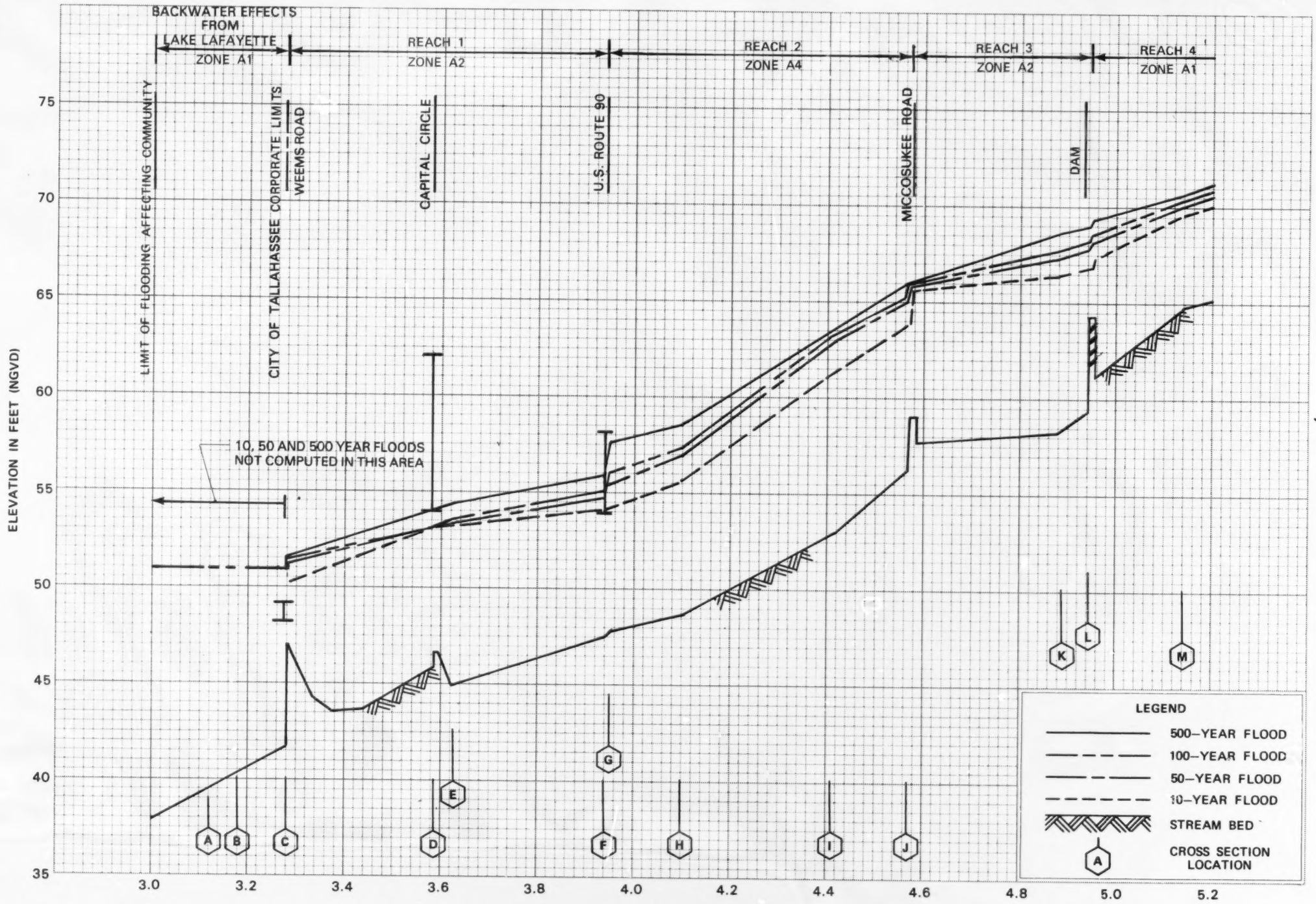

FLOOD PROFILES

WEST ARM TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

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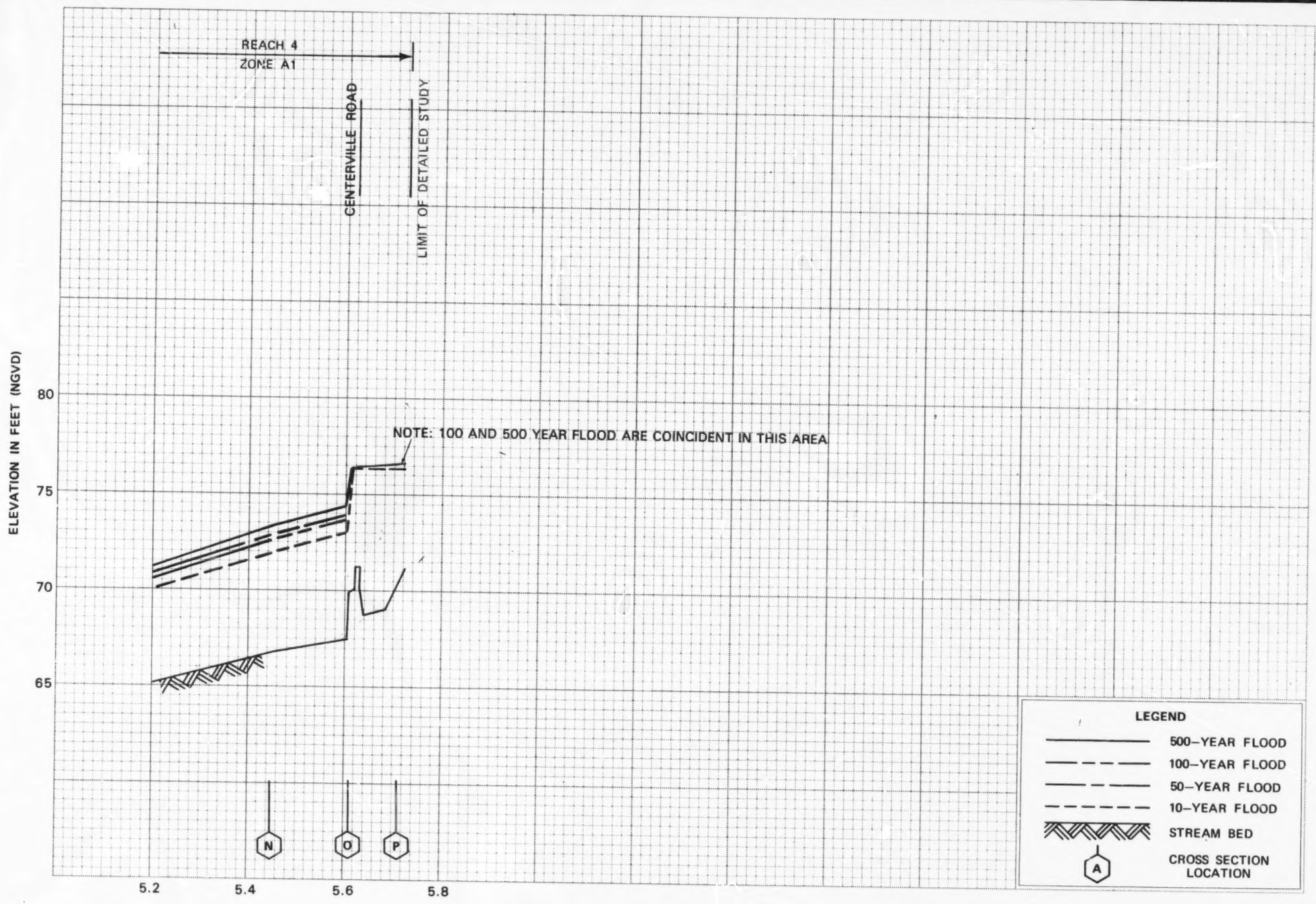

FLOOD PROFILES

WEST ARM TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

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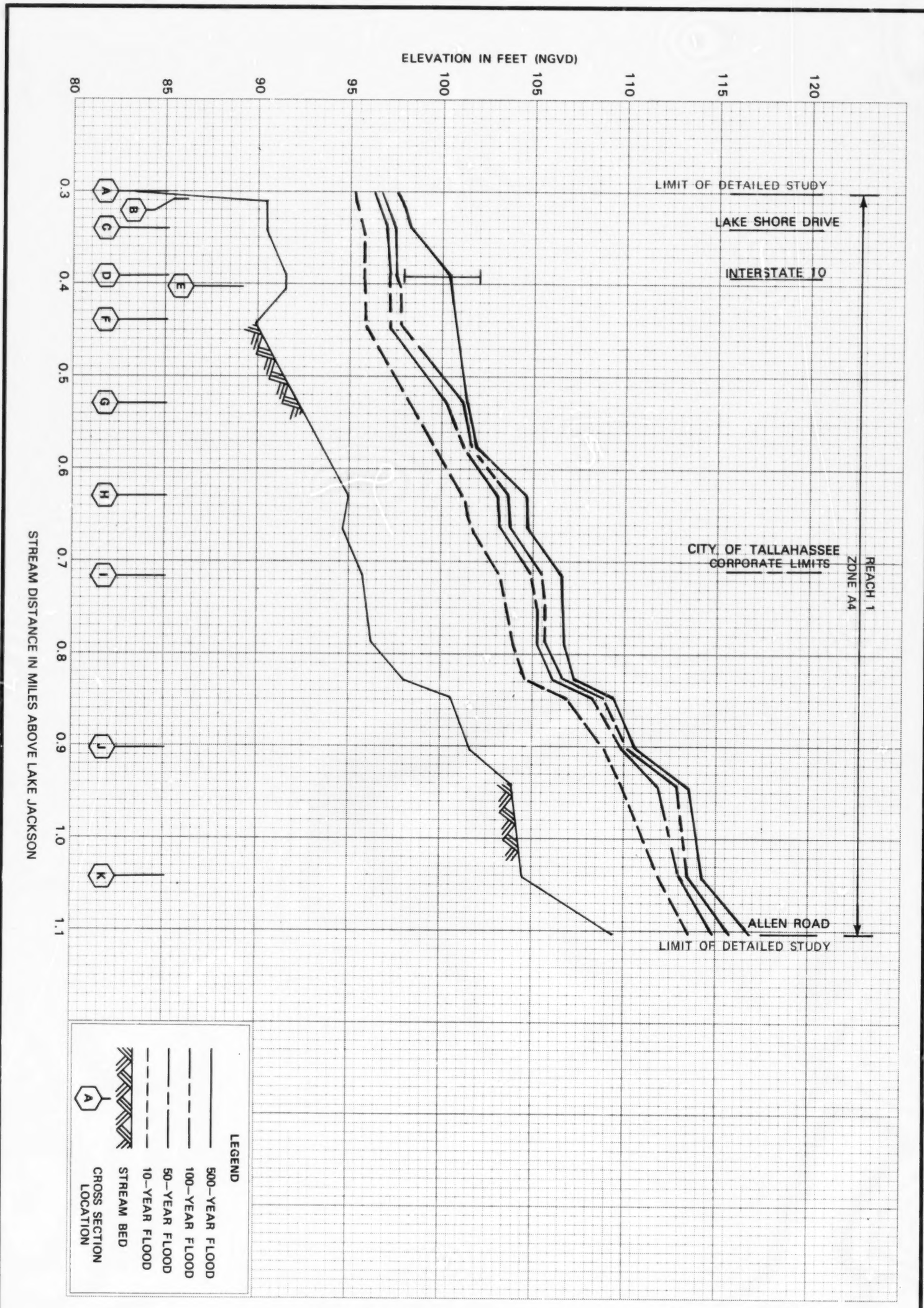

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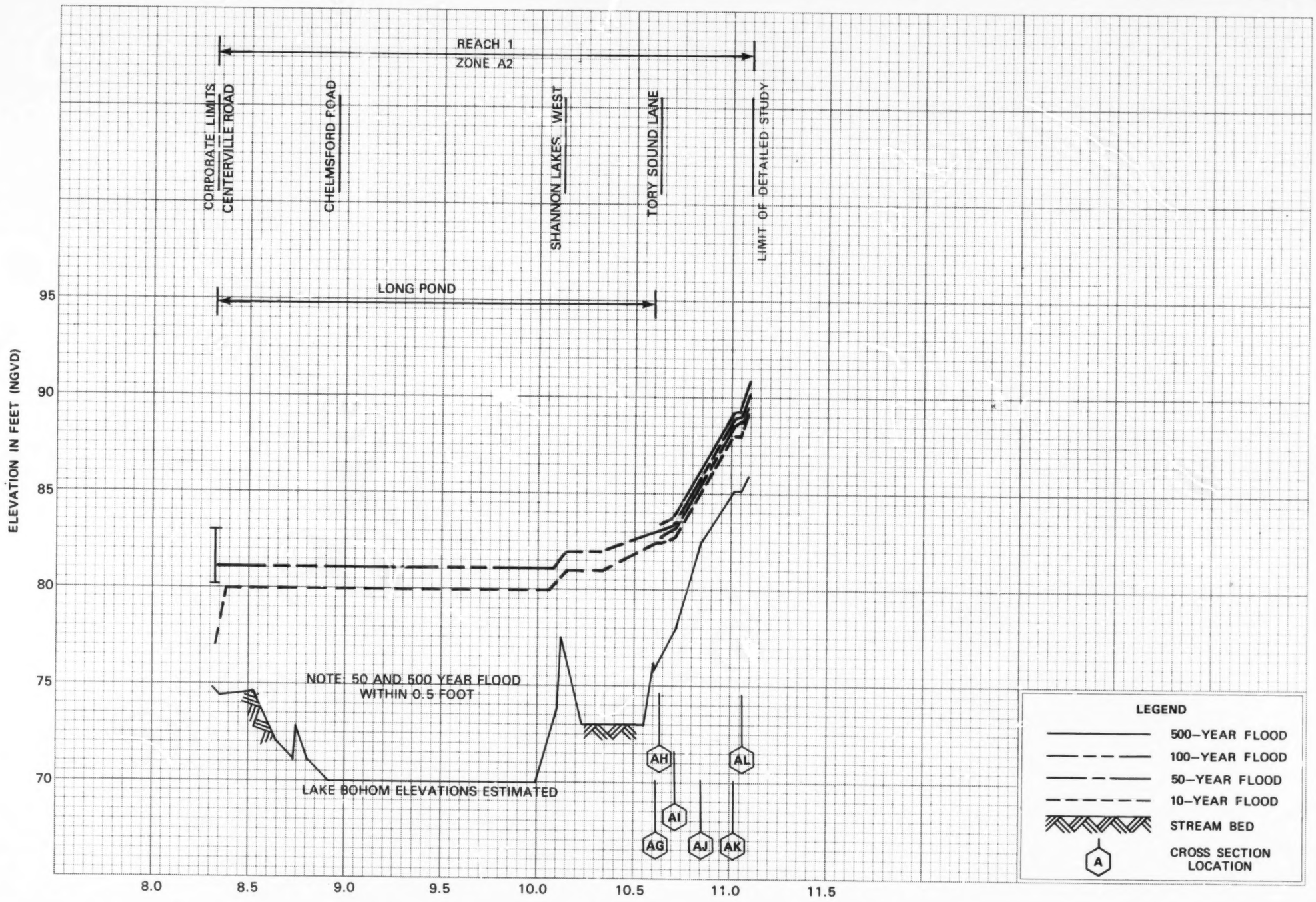

FLOOD PROFILES

ALFORD ARM TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

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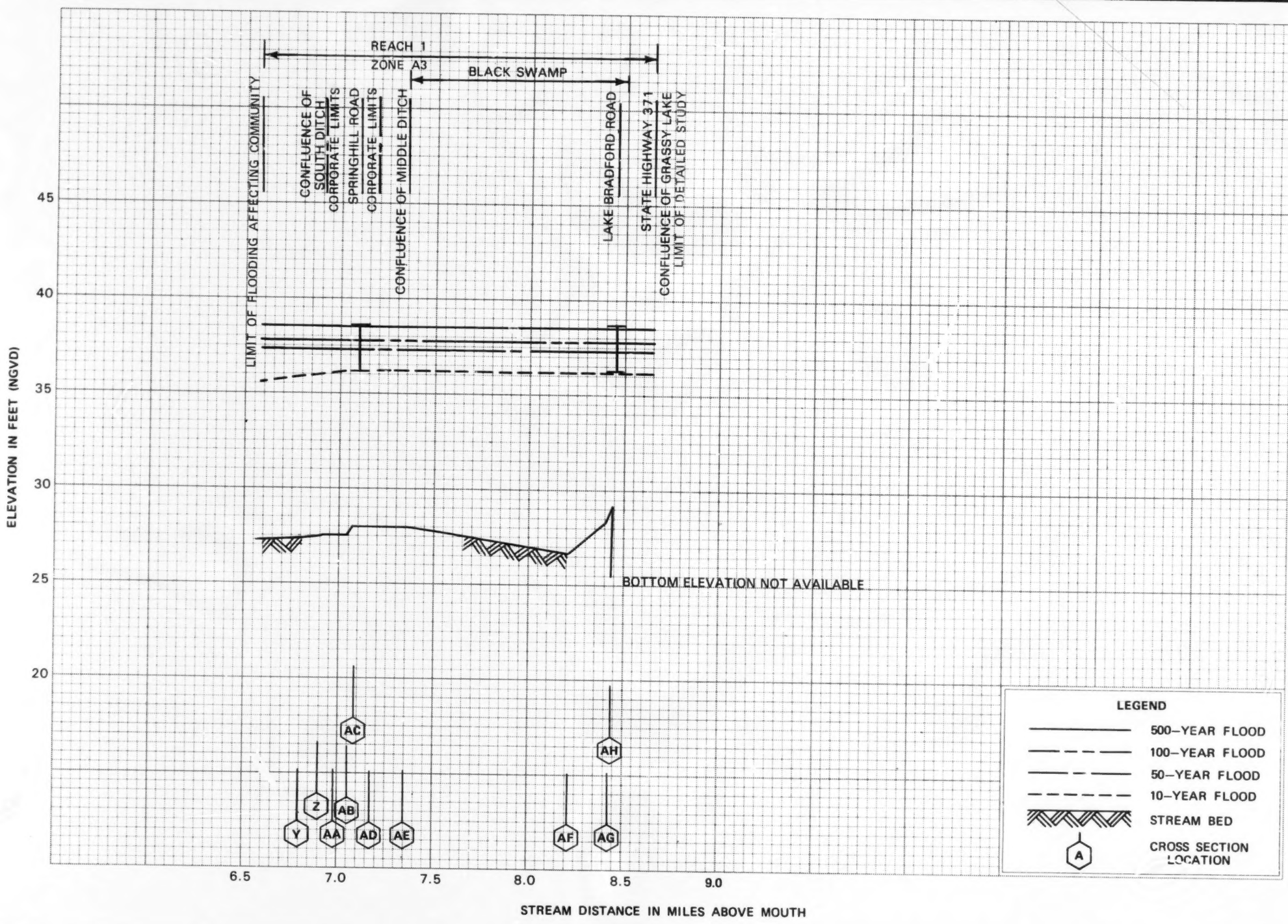

FLOOD PROFILES

MUNSON SLOUGH

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

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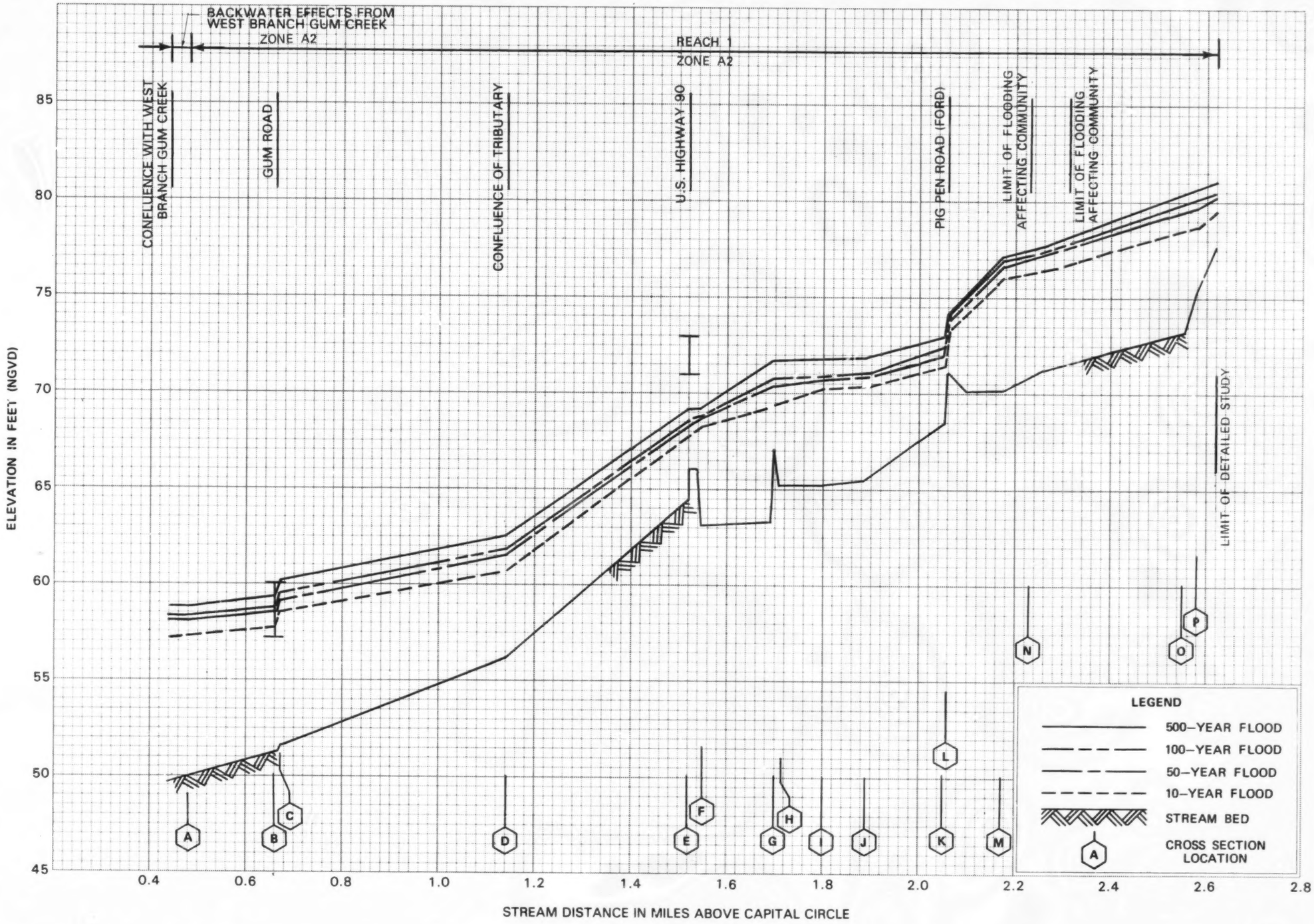

FLOOD PROFILES

NORTH BRANCH GUM CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF TALLAHASSEE, FL

(LEON CO.)

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REVISED: 8/5/85

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